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THE PLANT DISEASE REPORTER

Continuation of

THE PLANT DISEASE BULLETIN

Issued By

THE PLANT DISEASE SURVEY

Volume VII Number 3

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BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

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STEM RUST OF GRAINS

No stem rust has yet been observed on wheat in Kentucky, according to Valleau (July 1). In North Dakota the disease appeared late, being first noticed June 29 at Fargo, and the infection is slight although apparently quite general in some sections (Weniger, July 5). In Arizona, Brown reports that dry weather has been unfavorable for the development of rust, which has caused less than one percent loss in the southern part of the state. On the other hand Fromme reports that in parts of Pulaski and Wythe Counties, Virginia, stem rust is causing severe damage, which is "directly proportional to the presence of the native barberry, Berberis canadensis. These were found in great numbers; many on the borders of wheat fields and some even within the fields." Mackie reports the disease from California.

On oats, infection was light but common in the coast counties and the Sacramento Valley in California according to Mackie. Both North Dakota and Arizona report that stem rust has not been observed on oats. Some was found on barley in the former state.

STRIPE RUST (PUCCINIA GLUMARUM) REPORTED FROM IDAHO AND CALIFORNIA

Idaho: Stripe rust has appeared this year in various parts of the state upon Hordeum jubatum and there have been a few reports of slight infection upon wheat. The weather has been very conducive to spread of rust and if favorable weather continues I believe we can look for an epidemic of the disease.

Due to the fact that the last two years have been exceedingly dry there has been practically no rust of any kind and very little overwintering material has been found this spring. In the localities where conditions were favorable for overwintering the stripe rust has become quite general. (Hungerford, June 28).

California: Traces on wheat in all parts of the state but greatest quantity in the Sacramento Valley where considerable leaf pruning resulted. (Mackie, July 1).

LOOSE SMUT OF WHEAT

Additional reports on the occurrence of Ustilago tritici have been received from New York, Virginia, Kentucky, Missouri, North Dakota, and California.

Virginia: This has been a favorable season for the development of loose smut and the disease is more prevalent than usual and general in all fields of bearded wheat except those from treated seed. Average percentage infection found in bearded wheat was 3.6, and the maximum was 20. The modified hot water treatment is giving satisfactory results and will be greatly extended this year. (Fromme, July 1)

Kentucky: Generally trace to 1 or 2% in about 3,000 acres inspected in 10 counties. Largest count 19 percent in Mercer County. (Valleau, July 1)

Missouri: Smut has been very common in both wheat and oats this season, particularly loose smut of wheat... Some very serious cases of loose smut are being found in fields of wheat inspected for approval by the extension men. (L. J. Stadler, June 15. Cereal Courier 15: 120. June 20, 1923).

North Dakota: Loose smut seems to be more abundant this year than last, being more destructive in some wheats than was the case last season. Five percent infected heads is not uncommon in fields of Kota and Monad this year. Apparently weather conditions were favorable for the development of this smut. First date of appearance at Fargo was June 18. (Woniger, July 1).

California: Trace in rare cases. (Mackie, July 1).

TAKE-ALL (OPHIOBOLUS) FOUND ON WHEAT IN CALIFORNIA

"Positive identification of foot rot in wheat was made by Dr. H. P. Humphrey in the wheat plots at Davis on June 11. Specimens collected by myself for the past three years indicate that the disease is wide spread over the state and has probably existed here for many years. It is especially severe in the Sacramento Valley where instances are recorded showing 15% of the plants at harvest have failed to mature grain." (W. W. Mackie, July 1, 1923)

SCLEROTIUM RHIZODES ON WHEAT REPORTED FROM WASHINGTON

"Large patches in a field of winter wheat at Chelan were killed by Sclerotium rhizodes, which produced an abundance of sclerotia in the dead leaves ." (F. D. Heald, June 7)

UNDETERMINED FOOT AND ROOT ROTS OF WHEAT IN WASHINGTON

The following reports dated June 7, were received from F. D. Heald:

"A portion of a field at Palouse was killed by some unknown Basidiomycete, which was evident on the rotted roots and crown as white fungous strands. In the least affected portion of the field, the disease showed definite circular areas that were affected."

"Foot-rot, undetermined; first report from Freeman, May 20. The disease is developing in our Experimental Plots in the Spokane Valley. It may be noted that this is in agreement with expectations since the winter was open and in marked contrast to the previous winter which was not followed by any foot rot."

FLAX DISEASES

Brentzel reports that flax rust (Melampsora lini) has not yet been found in North Dakota, although it has been watched for. Last year it was first observed July 10.

Wilt (Fusarium lini) is considerably more severe in North Dakota than last year, causing losses ranging from a trace to complete loss in commercial fields, according to Brentzel (July 1). On June 10 the Section of Plant Pathology reported that very little of the disease had been found in the southern part of Minnesota, "either on new breaking or on old soil, probably due to cold weather after sowing time."

SCLEROTINIA TRIFOLIORUM FOUND ON RED CLOVER IN IDAHO

"This is the first authentic report of the disease in the state. Infection occurred at Dudley, Idaho, in fields along the Coeur D'Alene River. Rather severe locally on red clover." (Hungerford, June 2).

POWDERY MILDEW OF CLOVER

Ludwig reports that powdery mildew is apparently common on stray plants in South Carolina. In North Dakota, according to Weniger (July 5) the disease appeared in the vicinity of Fargo about the beginning of July and has spread rapidly, apparently being favored by moist warm weather. E. B. Mains states (June 28) that at Knoxville, Tennessee, "The Ohio and Tennessee strains of clover were quite badly mildewed; the Chilean strain showed a slight amount, while the Italian, French, and German strains showed none, or only a trace. This fits in with previous observations upon the susceptibility of these varieties."

APPLE SCAB

In Connecticut, according to Clinton, more scab has developed than was expected, although good spraying has been fairly effective in controlling it. In New Hampshire, Butler states that it is "scarce even in orchards

severely infected last year," while in New Jersey, according to a report from the Department of Plant Pathology, it is "absent in some orchards where it was very severe last year." The disease has caused damage in poorly sprayed orchards in New York. According to Dr. Guba a rather general and severe infection of scab occurred following rains of June 7, and other light precipitations since then. In Wisconsin there is less than usual over most of the state, due to dry weather at and following blossoming time, but in the southeastern part, where weather conditions were more favorable to infection, the disease is locally severe. The damage is very slight in Kansas, not more than 1% even in unsprayed orchards, although the very wet spring was favorable to the disease and it was expected that it would be very much more severe. According to White, however, "very few perithecia were found in the overwintered leaves." In the southern part of Ohio, where the weather was unfavorable to the application of the pre-blossom spray, the disease is severe in many orchards. Thomas reports that "spore dispersal was limited to a 10-day period this year in central and northern Ohio." In Iowa, according to Melhus, "Infection was delayed but has become more severe than usual following the third spray." Dana states that scab is abundant in western Washington.

FIRE BLIGHT ON APPLE SEVERE AGAIN THIS YEAR IN MANY STATES

New Hampshire: Somewhat more prevalent than last year. Twig blight only form observed. (Butler, July 1)

New York: Fire blight infections could seldom be found until about June 20, when the disease became prevalent over the entire state both on pear and apple and is now doing much damage. The disease has recently been observed in twenty-three counties of the state. Fruit spur infection is common in some counties in western New York and considerable reduction in yield of some varieties expected. (Chupp, July 1)

New Jersey: First observed on the Star variety on May 28 in Cumberland County. Has been reported since then from all sections of the state. (Department of Plant Pathology, July 1)

Kentucky: Very prevalent over most of state. Appeared too late to cause blossom blight but serious in new growth. (Valleau, July 1)

Ohio: Disease very severe in southern Ohio this year. Heavy infestation of apple aphis throughout the state is undoubtedly favoring the fire blight. (Thomas, July 1)

Wisconsin: More reports than for several years. Very bad in central and Mississippi Valley sections, less in Door County. Tolman Sweet frequently mentioned as most susceptible. (Vaughan, July 1)

Minnesota: Earliest report June 14. Definite reports from about 12 counties so far. Probably much more prevalent. Infection abundant and epidemic in form. The outbreak followed 3 or 4 hot humid days. Cool weather following checked growth markedly. (Section of Plant Pathology, July 1)

Iowa: Very serious in Southwest and western Iowa. (Melhus, July 1)

North Dakota: Fire blight is severe in the state this year. Many specimens have been received for identification. The disease is apparently as abundant as in 1920, and more severe than in 1922. (Weniger, July 1).

Kansas: Twig blight is very common this year on both apple and pear. Blossom blight was also common. (White, July 1)

Arizona: Always to be found in apple orchards in this state, but more destructive to pear trees. Fewer complaints have been sent in by apple growers this year. (Brown, July 1)

Idaho: Fire blight has been exceedingly bad this spring in various parts of the state. In the Boise Valley, Payette and Emmett districts, the disease has been especially severe. Jonathan and Spitzenburg varieties appear to be especially susceptible. In many orchards from 60 to 75 percent of the small branches have been killed back for six to twelve inches. This is the worst epidemic of the disease which has occurred since 1913. In many cases the green apples which are as large as walnuts have been attacked and are covered with the bacterial exudate.

The disease has also been especially severe upon pears. In some cases not a green leaf appears on the younger trees.

The months of May and June have been especially cold and wet. There has been more rain in June than has ever been recorded since weather records have been taken. (Hungerford, June 28)

Washington: More abundant in our important apple sections than for several years past. (Dana, July 1).

CEDAR RUST ON APPLE

Cedar rust has been reported on apples from Connecticut, New York, New Jersey, Minnesota, and Kansas. Melhus reports that in Iowa infection has not yet been found on apples, although there has been an unusual amount of sporulation on red cedars.

New York: As usual, the rust is becoming quite general in the Hudson Valley. The farmers are urging the legislature to pass a law that all red cedars must be eradicated. Owners of estates are not in sympathy with such a proposed law. The final outcome will probably be that the state will help furnish men to cut down the cedars when the owner of the trees requests such help. The area will be limited to districts within a certain distance from commercial orchards. The most severe infection was observed in Wealthy and Rhode Island Greening. (Chupp, July 1)

Kansas: Apple rust is more serious in Kansas than it has been for a number of years. Fruit infections are very common causing distortion and making them worthless. Aecia appear almost

entirely on the caylx end. Estimated damage is conservatively placed at 5%. Leaf infection on unsprayed trees runs very heavy, 80 to 90%. Trees sprayed with lime sulphur showed considerable control in the horticultural orchard. (White, July 1)

DISEASES OF PEACH

Twig blight caused by Phoma persici - Ohio: "A number of cases have been reported which are referred to this disease, the symptoms being small cankers often starting from a bud or twig base, and causing death of the twig by girdling." (Young, July 1)

Die-back caused by Valsa leucostoma - New York: "Dr. Guba has observed much die-back due to Valsa leucostoma on peach twigs that have previously been injured by low temperatures." (Chupp, July 1).

Coryneum blight caused by Coryneum beijerinokii - Idaho: "Unusually prevalent this spring on peaches and apricots and has also been noted on cherries. As the disease does not appear in serious form every year many growers neglect to spray for it. In sections where it is necessary to spray for the San Jose scale the disease has not been noted." (Hungerford, June 28) The disease was reported from Delta County, Colorado, by Learn (June 7)

LEAF DISEASES OF STRAWBERRY

Mycosphaerella fragariae has been reported from New York, Maryland, Mississippi, Louisiana, Illinois, Wisconsin, and Iowa. In Mississippi and Louisiana it caused considerable damage early in the year. Otherwise it is said to be not more severe than usual, and in some cases - Illinois, Iowa - is less so. Edgerton stated that in Louisiana the disease "seemed to be worse on plants that were not otherwise in good health."

Mollisia earliana - Illinois: Scattered occurrence, infection as a rule not severe. (Tehon, July 1). Specimens have been collected also in North Carolina, Georgia, and New York this year.

Dendrophoma obscurans - Illinois: "In Jackson County a patch of half an acre, presumably the Dunlap variety, showed 75% infected plants with a reduction in leaf surface varying from about 1/5 to complete destruction. This was on June 4, at the time the crop was being picked. The plants were bearing heavily. A second slight infection was reported from Peoria County on June 29." (Tehon, July 1)

Ascochyta colorata - Connecticut: "Common as usual on Glen Mary, but not bad on other varieties." (Clinton, July 1)

CHLOROSIS OF GRAPE APPEARS IN ILLINOIS

Under date of June 29, H. W. Anderson writes as follows:

"A type of chlorosis which seems to be almost epidemic in character is appearing in the region about Collinsville."

Have troubles of a similar nature been found in other states?

ONION DISEASES REPORTED FROM LOUISIANA

The following diseases are reported by Edgerton (July 1):

Downy mildew (Peronospora schleideni) - Caused considerable loss in some sections.

Black stalk rot (Macrosporium parasiticum) - Severe as usual on the seed onion crop. Loss from 25 to 50%.

Pink root (Fusarium malli) - Common in a number of sections in this state.

LETTUCE DISEASES

Leaf spot caused by Septoria lactucae - Illinois: " We have an abundance of Septoria on the lettuce throughout our trucking areas. The damage appears limited largely to external leaves. Infection is followed in moist periods by rots which considerably reduce the sale value of the crop." (Tehon, July 1). In Wayne County, New York, Septoria leaf spot was found on lettuce grown from seed known to be infected, according to A. G. Newhall (June 18).

Bacterial rosette caused by Aplanobacter rhizoctonia - Ohio: "Numerous cases of this disease have been observed in Cuyahoga County. In no case has the loss been greater than 5%." (Thomas, July 1)

Pre-maturing due to very hot weather - Connecticut: "Two or three reports of lettuce going prematurely to seed. One grower reports a total loss of a field, involving a financial loss of over $1,000. Due to a few very hot days in May and a second period in the middle of June." (Clinton, July 1)

ANTHRACNOSE ON SYCAMORE IN OHIO

"This disease seems to be more prevalent and serious than usual at this time of the year; manifested by leaf infection and twig blight." (Thomas, June 15).

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